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Future Wealth Inequality in an Ageing Population

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Introduction

It is generally agreed that an even distribution of wealth within a society is preferred to wealth inequality. For this reason, it is regarded as one of the key performance indicators of a society and governments throughout the world introduce policies that attempt to redistribute wealth from the rich to the poor. The policies aim to produce a more even distribution and consequently a 'better society'. Capital gains taxation, inheritance taxes and assisting poor families in purchasing a home are examples of wealth redistribution policies.

The accumulation of wealth is a function of the decision to save a portion of a person's income rather than consume it. The level of wealth accumulated will be influenced by a range of factors but it will be a function of the income of the person, their preference for savings and how long the person has been earning income. As income and longevity in the labour force are generally related to age, it is not surprising that the distribution of wealth shows a strong relationship to age – at least until retirement age.

What happens to the distribution of wealth in an ageing population? This is an important question for governments, given their preference for a more equal distribution of wealth and the onset of an ageing population in most developed countries. If the result is an improvement in wealth inequality, then almost all OECD countries can relax and just wait until the improvement takes place. On the other hand, if inequality is going to increase, most countries need to begin implementing policy in the near future that will dilute the impact.

In Australia, very little is known of the current distribution of wealth and almost no projections of future wealth distribution have been produced. This paper sets out to address these shortcomings by providing an insight into both present wealth inequality and the direction in which it is moving. The modelling undertaken employs a technique not previously used in Australia to estimate the distribution of wealth in the future – dynamic microsimulation.

MODELLING

Microsimulation is a special form of simulation based upon individuals and dynamic microsimulation is one that captures changes in individual behaviour over time. A particular strength of this type of modelling is that a very large sample is used. This allows a great diversity of experiences to be modelled, while not having the high costs, years of commitment and other problems associated with undertaking panel studies. Zaidi *et al.* (2001) provide a comprehensive summary of current dynamic microsimulation models in the world.

The National Centre for Social and Economic Modelling (NATSEM) have developed a dynamic microsimulation model that is able to provide quantitative projections of family wealth holdings for Australia. This is the model used in this paper. The workings of the model are outlined in King, Bækgaard and Robinson (1999) and the development of its integrated family wealth module is described in detail in Kelly (2003). While the model is able to provide very detailed estimates of wealth holdings

and the distribution of wealth over the period from 1986 to the middle of the 21st century, in this paper the model will be restricted to projecting the period between 2000 and 2040.

DEFINITION OF WEALTH

The term wealth does not have a unique meaning. It can mean different things to different people and can be defined in broad terms or in more narrow ones. Generally, wealth relates to the control of economic resources or “a store of spending power that can be carried into the future” (Jones and Perkins 1986, p.150).

For practical reasons, in this paper I use a very narrow definition of wealth. This definition defines wealth as the market value of the sum of financial and physical resources less any liabilities – that is, expressed more simply, as the total value of assets held by a family minus total debt (Podder and Kakwani, 1973). Data on wealth of Australian households, even based on this simplified definition, is not available and impossible to measure. In this paper the assets and liabilities that are considered part of wealth are interest-bearing deposits (savings and deposit accounts), dividend paying investments (equities, royalties), owner-occupied housing and associated mortgages, investment rental properties and associated mortgages, private retirement savings or pension plans (called “superannuation” in Australia).

As stated above, this is not a complete list of household assets and liabilities let alone a true value of wealth. However, it does provide good coverage of the more significant items owned by most Australian families. Notable items excluded from the above list are the value of consumer goods (including cars, antiques and artworks), cash holdings, zero-interest accounts, zero-dividend shares, business assets, life insurance, higher education debts, and credit card debts. The net effect of the exclusions is likely to result in an underestimate of the wealth of the very rich and an overestimate for the very poor. This is because personal loans and credit card debts are likely to be small in comparison to the value of the consumer goods and other excluded assets for the very rich, while the opposite is most likely the case for the poor.

Wealth in the 1990s

Using income investment techniques to impute asset values onto those in ABS income distribution surveys and other data, Kelly (2001) has made estimates of the level and distribution of wealth among Australian families in 1986 and 1998. Based on these estimates, this was a time of considerable growth. The richest ten percent of Australian families increased their wealth from an average of \$403,000 in 1986 to \$852,000 in 1998. Yet, the poorest decile of Australian families had no wealth on average in 1986 (in fact, they had an average debt of \$2,000) and still had none in 1998 (their debt decreased slightly).

Even with this apparent differential growth, wealth inequality did not increase. Kelly estimates that there was a negligible change in the Gini coefficient for total net wealth between 1986 and 1998. He calculates that the Gini coefficient was 0.648 in 1986

and 0.646 in 1998. Despite the lack of a significant observable overall change, wealth in the form of home equity and cash deposits became more concentrated and it appears that the overall inequality of wealth would have increased had it not been for the introduction of compulsory superannuation. Thus, Kelly suggests that compulsory superannuation neutralised the growing concentration of wealth in other areas.

Wealth Trends 2000-2040

In this section we move from the current world to the future and use the NATSEM dynamic microsimulation model, DYNAMOD, to project the levels and distribution of family wealth for the period from 2000 to 2040.

LEVELS OF WEALTH

The simulated average family wealth for the year 2000 was \$170,200. While direct comparisons with other data for that year are not available, simulated estimates have been generated for selected years around this time and these have compared favourably with other estimates. One example is Kelly (2001). He used the 1997-98 ABS Survey of Income and Housing Costs to estimate that the average family wealth at \$167,000 in 1998¹.

According to the DYNAMOD simulation, by 2040 average family wealth holdings will have increased to \$741,800 in real terms. This represents an annual real growth of 3.7 per cent. The estimated 'per family' wealth growth rate of 3.7 per cent seems reasonable when compared with external estimates. For example, using quite different methodology, Kelly (2002) has estimated 3.9 per cent per household for the last decade. Given the general consensus that the asset growth of the 1990s will not be able to be sustained over the long term, a slightly lower growth rate seems reasonable.

As noted above, the overall growth rate for average family wealth over the period 2000 to 2040 is estimated to be 3.7 per cent but there is considerable diversity in the rate for the different assets. As shown in Table 1, home equity is estimated to grow at an annual rate of 3.0 per cent, cash deposits at 6.0 per cent, superannuation at 2.4 per cent, rental property equity at 4.2 per cent, and shares at 5.0 per cent.

Table 1 shows that cash deposits are the fastest growing family asset over the 40-year period until 2040. Cash deposits are projected to grow from an average \$16,600 in 2000 to an average of \$169,900 in 2040. While this seems an extraordinarily high figure, it does only represent an average annual growth rate of 6.0 per cent in real terms for the period. A feature of the simulation may also be influencing the growth in this asset type. The simulation is designed to recognise the observed behaviour of older people to keep funds in lower risk investments. Therefore, a cash deposit in the

¹ The net wealth estimate for 1998 as stated in Kelly (2001) is \$191,000. After subtracting business assets of \$24,000 (which are not simulated) the value \$167,000 is obtained.

simulation really refers to a low risk investment. With an ageing population it is perhaps not surprising that more funds are making their way into low risk investments.

Table 1 Estimated average real family wealth, 2000-2040

		Cash Deposits	Shares	Home (net)	Rental properties (net)	Super	Total Wealth
2000	\$	16,600	23,400	82,100	8,800	39,400	170,200
2010	\$	22,700	32,300	96,100	9,300	59,500	219,800
2020	\$	42,200	56,800	145,300	17,000	77,000	338,300
2030	\$	85,700	54,400	189,500	25,800	90,700	446,000
2040	\$	169,900	162,700	263,600	45,700	100,100	741,800
Average Annual Real Growth	%	6.0	5.0	3.0	4.2	2.4	3.7

Source: DYNAMOD

At the other end of the growth scale are housing and superannuation. These are both projected to grow in real terms over the 40 years (3.0 per cent and 2.4 per cent per annum respectively) but not at the same rate as some of the other assets and this will impact on their share of the average family's wealth portfolio. For example, the dilution of the importance of equity in the family home is clear. In 2000, equity in the family home (the brick-shaded area) represented over half of the total; by 2040 the equity will have doubled in size but have dropped to around one-third of the total. Its importance in the average portfolio will have diminished.

Another feature of the forecast asset growth over the 40 years is the different rates at different times. For example, the preference for cash deposits is related to the increased proportion of people in retirement, as discussed above, and this results in the growth of 3.2 per cent per annum between 2000 and 2010 (\$16,600 to \$22,700) and more than double this rate (7.1 per cent) between 2030 and 2040 (\$85,700 to \$169,900). At the other end of the spectrum is superannuation. While enjoying strong growth of 4.2 per cent in the early part of the century (\$39,400 in 2000 to \$59,500 in 2010), it drops to only 1.0 per cent per year from 2030 to 2040 (\$90,700 to \$100,100), as the number of new workforce entrants falls.

DISTRIBUTION OF WEALTH

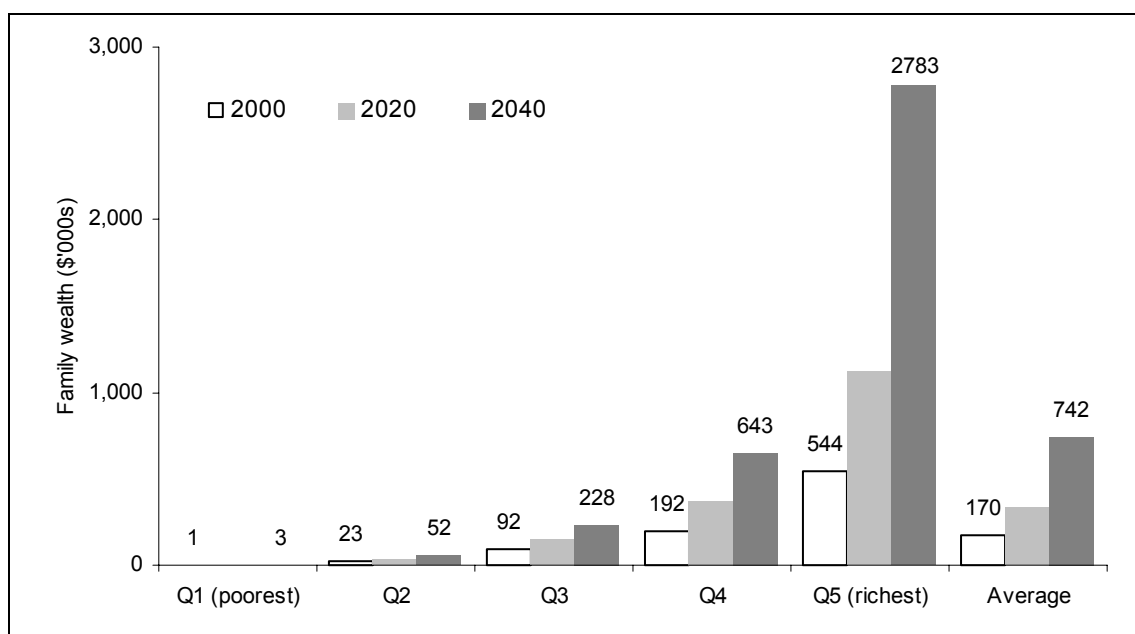
The previous section estimated that the levels of average wealth will increase dramatically between 2000 and 2040. At the same time, we find that the distribution of wealth is also estimated to undergo considerable change. The changes are presented in this section.

Distribution by wealth ranking

Appendix A contains detailed tables of the breakdown of estimated real wealth by asset type and percentile in 2000, 2010, 2020, 2030 and 2040. Families have been ranked by total wealth and then the average wealth has been calculated for each decile. The richest decile (percentiles 91-100) has been further broken down into those in the 91-95 percentiles, 96-99 percentiles and the top one per cent. The first table for each year shows the average value of each type of asset owned by each group while the second table shows the share of the overall asset wealth owned by each group. Average values are also provided in the tables.

In Figure 1, the tables of Appendix A are shown in a condensed form for the years 2000, 2020 and 2040. The percentiles in each year have been aggregated into five quintiles. Quintile 1 represents the poorest 20 per cent of families, Quintile 2 the next 20 per cent, up to Quintile 5 representing the richest 20 per cent. The figure also shows the estimated average wealth for each year. These averages match the estimates discussed in the previous section.

Figure 1 Estimated wealth by quintile, selected years, 2000 to 2040



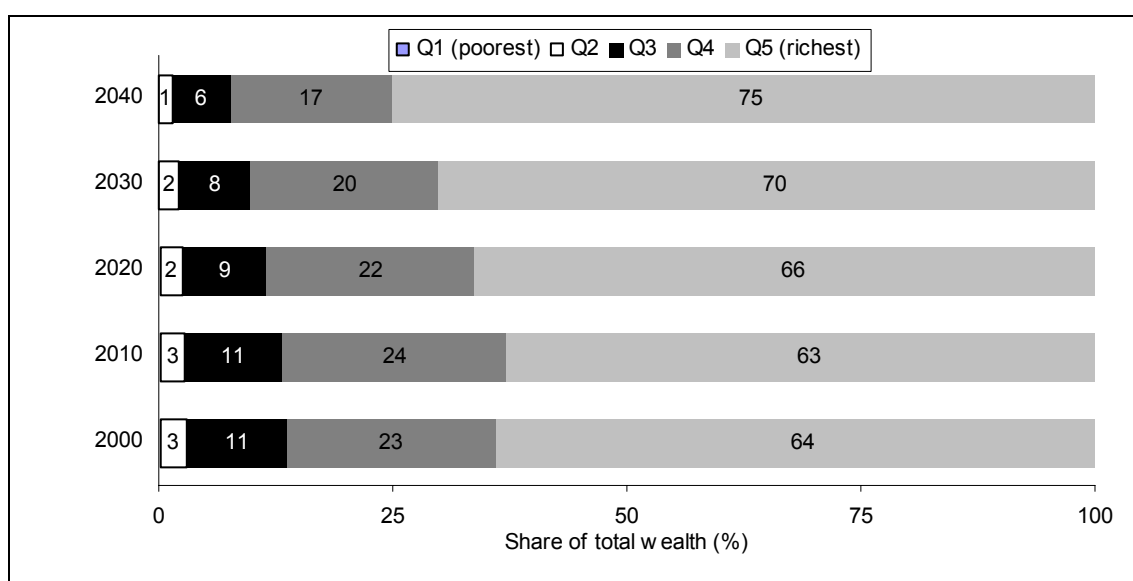
Note: The numbers shown are the 2000 and 2040 estimated average wealth for that quintile.

Source: DYNAMOD projection

The growth in the level of wealth discussed in the previous section is evident again in Figure 1. Average wealth per family is projected to increase from \$170,000 in 2000 to almost three-quarters of a million dollars in 2040. An important aspect that is clear from Figure 1 is that not all families will benefit equally from this increase. The financial situation of the poorest families does not change significantly while the richest families increase their already significant wealth. In 2000 the wealth of the poorest 20 per cent of Australian families was estimated at almost nothing (total net wealth of \$1,000 according to the simulation) – and in the year 2040, while their total net wealth will have increased three-fold, it will still be insignificant at \$3,000. In contrast, the experience of the top 20 per cent of Australian families over the 40 years

is expected to be vastly different. In 2000, the average net wealth of members of this group was estimated at \$544,000 and by 2040 it is projected to have increased to almost \$2.8 million. The financial position of the poorest quintile effectively does not change in the next 40 years, while the top quintile will see their average wealth increase five fold. Using the more detailed data in Appendix A, even greater diversities of outcomes are evident. The poorest 10 percent only increase their estimated wealth from \$0 to \$300 over the 40 years while the wealth of the richest one per cent is estimated to grow by almost \$7.5 million to \$9.7 million.

Figure 2 Estimated share of total family wealth by quintile, selected years, 2000 to 2040



Note: The numbers shown are the percentage of the estimated share of the total wealth in that year. Quintile 1 is too small to be visible (0.2% in 2000 down to 1% in 2040)

Source: DYNAMOD projection

The proportion of wealth held by the poorest 80 per cent of families is projected to decrease over the 40-year period while the proportion held by richest quintile increases. The changes in share can be seen in Figure 2. The poorest quintile in 2000 has such a small share of the pool of family wealth (0.2 per cent) that it not visible on the graph. By 2040 the estimated share is still too small to see and is projected to be less than it was in 2000 at 0.1 per cent. The second quintile loses two percentage points in its share of total net wealth; the third loses five percentage points; and the fourth loses six percentage points. In general terms, the greater the share of wealth owned by the quintile, the greater the loss. This indicates that the differences between the quintiles for four-fifths of families are decreasing. In contrast to this, the richest quintile is projected to increase its share of wealth from 64 per cent in 2000 to 75 per cent in 2040. This represents an increase of 11 percentage points in their share of total family wealth. Wealth inequalities are decreasing but not in the way most observers would want, as the majority of families are moving towards the bottom.

The changes in the distribution are suggesting a polarisation of the population into two groups – a poor group and a rich group. This two class system suggests a return to the situation at start of the 20th Century where almost all wealth was in the hands of one group – in that case the landowners – and a small proportion was spread amongst

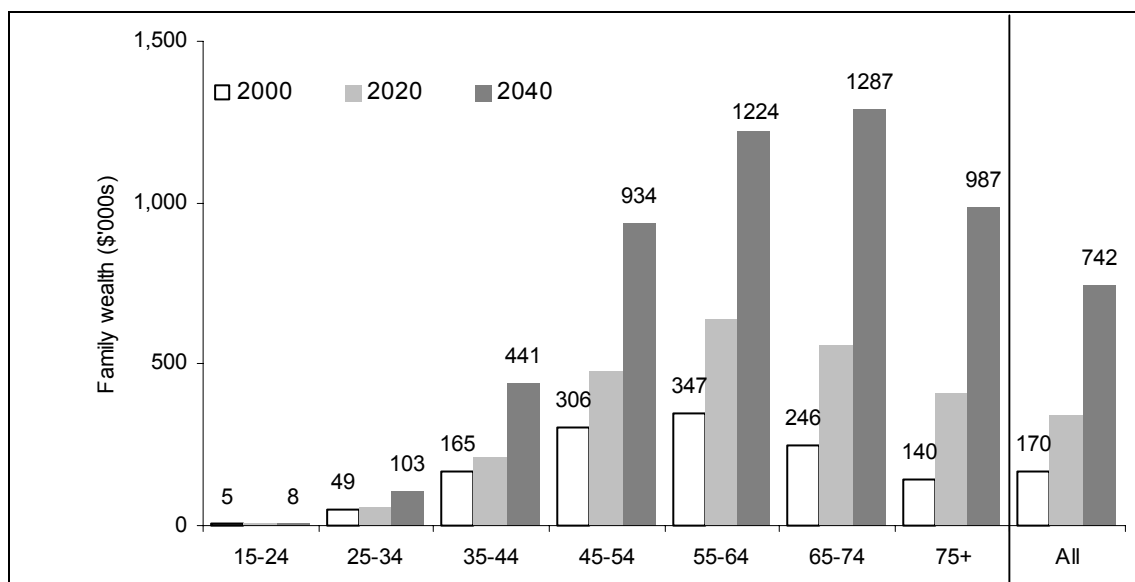
the remainder of the population. The thinning out of the middle, through the movement of 80 per cent of the population down to the low end and the movement up for the 20 per cent at the top, appears to be a return to a bipolar dispersion of wealth. The factors underlying this projected shift are explored in some detail in the following sections.

In summary, estimates of the level of wealth in 2000 show that a significant gap currently exists between the rich and the poor. In the 40 year period from 2000 to 2040, the wealth of families in the bottom three poorest quintiles is projected to increase 2.3 times while those of the top two quintiles are projected to increase 4.2 times. These forecasts imply the gap between the rich and the poor will grow. This interpretation is confirmed when the share of wealth held is calculated. The top 20 per cent are forecast to increase their share over the period, while all other quintiles see a reduction in their share.

Distribution by age

The tables in Appendix B provide breakdowns of estimated real wealth by asset type in 2000, 2010, 2020, 2030 and 2040 for families with the head aged in five-year age groups from 15-74 and for family heads in the older group aged 75+. Ten-year age groups and the years 2000, 2020 and 2040 are shown in Figure 3.

Figure 3 Estimated average wealth per family by age of family head, selected years, 2000 to 2040



Note: The numbers shown are the 2000 and 2040 estimated average wealth for families of that age group.

Source: DYNAMOD projection

The wealth of a family headed by a person aged 15-24 varies is estimated to vary little over the period – increasing from an estimated average family wealth of \$5,300 in 2000 to an estimated \$7,900 in 2040. The low level is not unexpected as the family is just starting to accumulate assets and the assets have had little time to appreciate in value. In general, the only significant asset will be a recently purchased family home

and the equity in that home is unlikely to be high. The value of the home will generally be offset by a mortgage of almost the same value.

At age 55-64, the picture is quite different. The average estimated wealth of families headed by a person in this age group was \$346,700 in 2000 and is projected to be over \$1.2 million in 2040. These families have traditionally owned a home for some time during which the house has appreciated in value and the mortgage has been reduced to near zero. The 55-64 year olds by now have significant wealth in the family home. In addition they have had 30 or more years of superannuation contributions and earned income from which to save. Overall they will have saved a considerable sum and this is exhibited in the large average wealth estimates.

According to the life-cycle theory of savings, the consumption plans of an individual vary as their income and income expectations vary. This results in people dissaving in the first part of their life by consuming more than they earn when their income is relatively low, saving in the middle part when income is relatively high, and dissaving again in retirement. The result is a hump-shaped savings profile over the life-cycle. With a hump-shaped savings pattern, wealth is expected to follow a similar pattern.

Figure 3 shows the expected hump in years 2000, 2020 and 2040. For year 2000, as discussed above, net wealth starts at near zero at age 15-24 and grows gradually during the working life of the family until it peaks before retirement. From this peak, the costs associated with retirement begin to impact on the level of wealth and it declines (from a peak of \$346,700 at age 55-64 to \$139,500 for those aged 75+ in 2000). The graphs for 2000, 2020 and 2040 all exhibit this same general hump shape, but there are some differences.

Examination of the first and last year of the simulation (2000 and 2040) show the gradual change in the hump shape. By 2040, the peak is occurring ten years later, in the 65-74 years range, and the peak is considerably higher than in 2000. The slope of the curve has also changed. While the change is not easily seen in Figure 3, the Appendix B tables clearly show that the curve now increases slowly until around age 40 and then the rate accelerates until around age 55. The gradient remains positive until age 70. After age 70, the gradient is negative but less than in earlier years. Over the period being simulated wealth has increased – but there is apparent later start to saving and the peak is occurring at a later age.

The changing gradient of the curve is evident if the growth rates at various ages are considered. Figure 4 compares the estimated average wealth of those of a certain age in 2000 with those of that same age in 2040. The difference is expressed as an annual percentage change. For example, the average wealth of families with a head aged 45-54 in 2000 is estimated at \$306,200 and in 2040 as \$933,900. This is a total increase of 205 per cent or an annual growth in the average of 2.8 per cent over the 40 years.

From Figure 4 the differential growth is apparent. The rate of family wealth growth is strongly correlated with age – as age increases, the rate of growth increases. An interesting feature of this relationship is that it does not change after retirement. While the level of wealth may be lower after age 75, the value of this wealth is growing at a faster rate than any other age group.

Figure 4 Change in estimated real average family wealth between 2000 and 2040 by age group

Note: The graph compares wealth of similar age groups in 2000 and 2040

Source: DYNAMOD projection

In addition to the average family wealth being projected to increase with age, the overall share of wealth held by older families is also forecast to increase over time. This growth is due to the increase in the number of older families and the growth in wealth with age discussed above.

Table 2 Estimated aggregate wealth by age group, 2000 to 2040

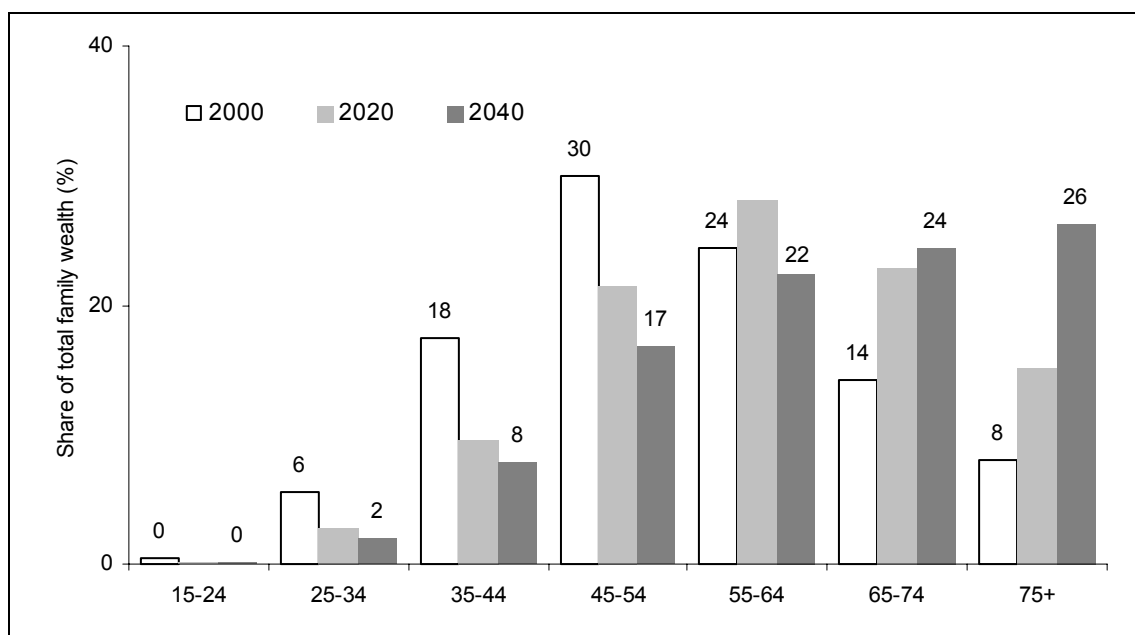
Age Group	2000	2010	2020	2030	2040	Change
	\$bn	\$bn	\$bn	\$bn	\$bn	%p.a.
15-24	7	8	9	9	12	1.2
25-34	90	79	107	120	188	1.9
35-44	282	295	370	440	747	2.5
45-54	483	564	834	877	1,606	3.0
55-64	394	707	1,094	1,447	2,122	4.3
65-74	230	411	886	1,315	2,317	5.9
75+	130	262	588	1,278	2,489	7.7
All ages	1,618	2,326	3,888	5,487	9,481	4.5

Note: The column *Change* is the difference between 2000 and 2040 expressed as a percentage p.a.

Source: DYNAMOD projection

Table 2 shows that the estimated total wealth held by families with a head aged 15-24 years was \$7 billion in 2000 and that it will grow at a rate of 1.2 per cent per year to be \$12 billion in 2040. At the same time the total wealth of families with a head aged 75+ years will increase from its 2000 value of \$130 billion to almost \$2,500 billion in 2040. This is an annual growth rate of 7.7 per cent.

Figure 5 Estimated share of total family wealth by age of the family head, selected years, 2000 to 2040



Note: The 2000 and 2040 shares of total wealth for that age group are shown as percentages.
Source: Table 2

The values for each age group in Table 2 (page 10) are shown as a share of the total in Figure 5. From the figure it is clear that the increasing wealth of older families and the ageing population are combining to provide some age groups with enormous growth in their share of total family wealth. All 10-year age groups up to age 65 lose a proportion of their share of total family wealth between 2000 and 2040. For example, the 35-44 age group see a reduction of their share from 18 per cent in 2000 to 8 per cent in 2040. In contrast, the two oldest age groups are projected to increase their share of the total. The simulation estimates that families with a head aged 65-74 years will increase their share of wealth from 14 per cent in 2000 to 24 per cent in 2040 – while the share for those aged 75 and over is projected to increase from 8 per cent to 26 per cent. Combining these two older groups, the projections suggest that 50 per cent of the family wealth will be controlled by families with a head aged 65 and over by the year 2040.

In summary, older Australians are the main benefactors from the projected future higher levels of wealth. Wealth already increases with age, but these projections suggest that the rate of growth also increases with age. When allied with population ageing, this produces a situation where the asset share of the young will remain at virtually zero over the next 40 years while the assets of those over 75, already estimated at eight per cent of the total wealth cake will increase by almost eight per cent per annum. The projections also suggest that half of all family wealth will be under the control of those aged 65 and over by the year 2040.

Wealth Inequality

The previous section projected changes to the levels and distribution of family wealth. Will these changes increase or decrease wealth inequality? Clearly, I have suggested that inequality will increase, but a more quantitative measure of the change is required.

One method of measuring changes in wealth inequality is to derive and compare the Gini coefficients. Remembering that a Gini coefficient of one means all wealth is held by one person while a value of zero represents total equality across the population. Therefore, if the Gini coefficient increases between 2000 and 2040, this would imply that there will be a higher concentration of wealth in the hands of the rich at the end of the period; if it is projected to decrease then wealth will be redistributed from the rich to the poor in a more equitable manner.

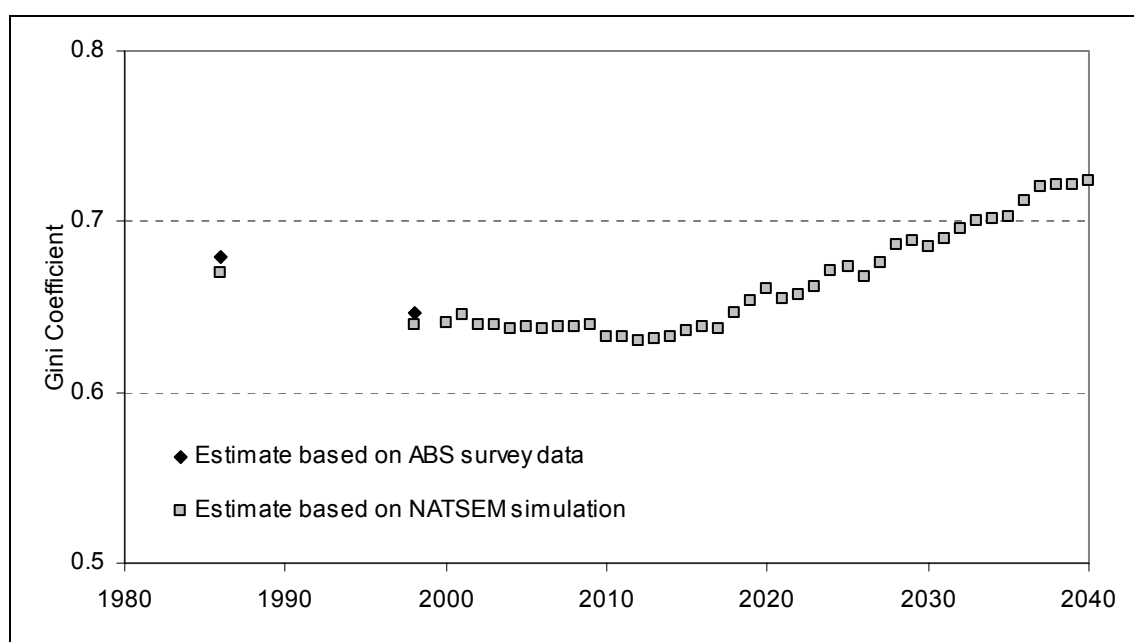
Table 3 Simulated Gini coefficients

	ABS survey-based Gini Coefficient		Simulated Gini Coefficient	
	Net Wealth	Wealth (Excluding Super)	Net Wealth	Wealth (Excluding Super)
1986	0.648	0.679	-	0.670
1998	0.646	0.715	0.639	0.696
2000	-	-	0.641	-
2010	-	-	0.633	-
2020	-	-	0.660	-
2030	-	-	0.685	-
2040	-	-	0.716	-

Source: see text

Table 3 contains simulated Gini coefficients for the period 2000 to 2040, in addition to the Gini coefficients derived from Australian Bureau of Statistics surveys for 1986 and 1998. In Figure 6 the data from this table plus simulated annual Gini coefficient values over the period 2000-2040 are shown. The graph shows the estimated coefficient in 2000 to be 0.641. Over the simulated period, the Gini coefficient value is forecast to remain at this level until 2012 and then start to climb. The highest Gini coefficient of 0.724 is estimated to occur in 2040. In terms of wealth inequality, these changes in the Gini coefficient imply that the concentration of wealth will remain at current levels for the next ten years but from then until 2040 wealth will become more concentrated.

The Gini coefficient movement appears to reflect the changes in wealth holdings discussed in the previous section. Regrouping the data presented in the Appendix A tables provides some further insights into why the coefficient remains at its current level before rising (Table 4). Between 2000 and 2010 the estimated proportion of wealth held by the poorest half of families drops from 7.0 per cent to 6.7 per cent — but at the same time, the proportion held by the richest one-fifth drops from 64.0 per cent to 62.7 per cent.

Figure 6 Estimated wealth Gini coefficients for selected years, 1986-2040


Note: The 1986 estimates refer to wealth excluding superannuation

Source: Table 3 and DYNAMOD projections

In other words, as well as the wealth of the poor falling, the relative share of wealth held by the rich is falling. This combination of movements results in no net change to the overall distribution. In reality, some of the wealth in the top 20 per cent is projected to move to those in the group just below them – those in the 51st-80th percentiles. In other words, the wealth will not transfer to those in real need (the bottom half) but rather it will be slightly more evenly spread among those who are already well off. This redistribution may create a slightly more equitable distribution of wealth but it is hard to see any significant community benefits coming from such redistribution.

Table 4 Estimated distribution of wealth by selected percentiles, 2000-2040

Wealth Percentile	2000	2010	2020	2030	2040
	%	%	%	%	%
Top 1%	13.0	11.7	11.8	11.7	13.0
Top 5%	31.6	29.2	30.9	32.7	36.8
Top 10%	45.3	43.1	46.1	49.5	54.8
Top 20%	64.0	62.7	66.4	70.0	75.1
Bottom 50%	7.0	6.7	5.7	4.9	3.7

Source: Tables A-2, A-5, A-8, A-11, A-14

The redistribution occurring from 2010 to 2040 is quite different. Over this period the estimated Gini coefficient is projected to increase steadily from 0.633 to 0.724, an increase of over eight per cent. The inequitable distribution of wealth of 2010 becomes more concentrated by 2040 — and this time the redistribution is at the expense of the poor. The poorest half of the population will see their share of the wealth “pie” reduced over this period. In total, over the forty years until 2040, the

wealth share of the poorest half is projected to fall by almost half, from 7.0 per cent in 2000 to 3.7 per cent in 2040. Given the extremely small proportion owned by this group at the start of the period, the reduction by half will make a significant difference. It will also greatly magnify the significant differences between the rich and poor.

If the assumptions underlying the projection for 2040 are correct, then wealth inequality will have returned to levels not seen since the start of the 20th Century. The estimated proportion of wealth owned by the poorest half in 2040 at 3.7 per cent is considerably lower than the proportion owned in 1915 at 4.7 per cent. While there are a number of differences in the methodology, it appears that after 125 years the poor will be back where they started. The overall concentration of wealth in 2040 will not be as high as 1915 (as the lower Gini coefficient indicates) because wealth is more evenly spread among the top half of rich families. In 1915, more than 85 per cent of wealth was held by the top 20 per cent; for 2040 the estimate is 75 per cent. The wealth will be more evenly spread among the wealthy but the poor will be worse off.

In summary, it is estimated that wealth inequality will increase in the next 40 years. For the period 2000-2010, the wealth of the poor will decrease but it will be balanced by a redistribution of wealth amongst the wealthy and the net effect is that the measure of aggregate inequality stays at its current level. From 2010 to 2040, the reduction in the share of wealth held by the poor will continue and the redistribution amongst the rich will be minimal – and thus wealth inequality will increase.

IMPACT OF AGEING

Earlier in the paper, it has been projected that the share of wealth held by older families will grow strongly. According to the simulation, half of all family wealth will be owned by families with the head aged 65 and over by 2040. But we know that major demographic changes are taking place and the population is ageing. Is it possible that the changes in wealth are simply a result of demographic changes?

A second possibility is that inequality within an age range is increasing and the average we are seeing is skewed upwards and in fact the situation is not greatly improved for the family in the middle (due to a few very rich families in each age group). Variability within an age group also needs to be considered.

Wealth and population ageing

A simple way to see if the wealth of older Australians is growing through effects other than demographics is to retain the 2000 population age profile.

In Table 5 the simulated number of families for 2000 and 2040 by age group are presented. It can be seen that the number of families aged 25-34 remains almost constant at 1.8 million between 2000 and 2040 while the number of families aged 75+ increases from 0.9 million to 2.5 million. Perhaps this change is largely responsible for the increased share of wealth by older Australians?

Table 5 Estimated total family wealth share by age group in 2000 and 2040

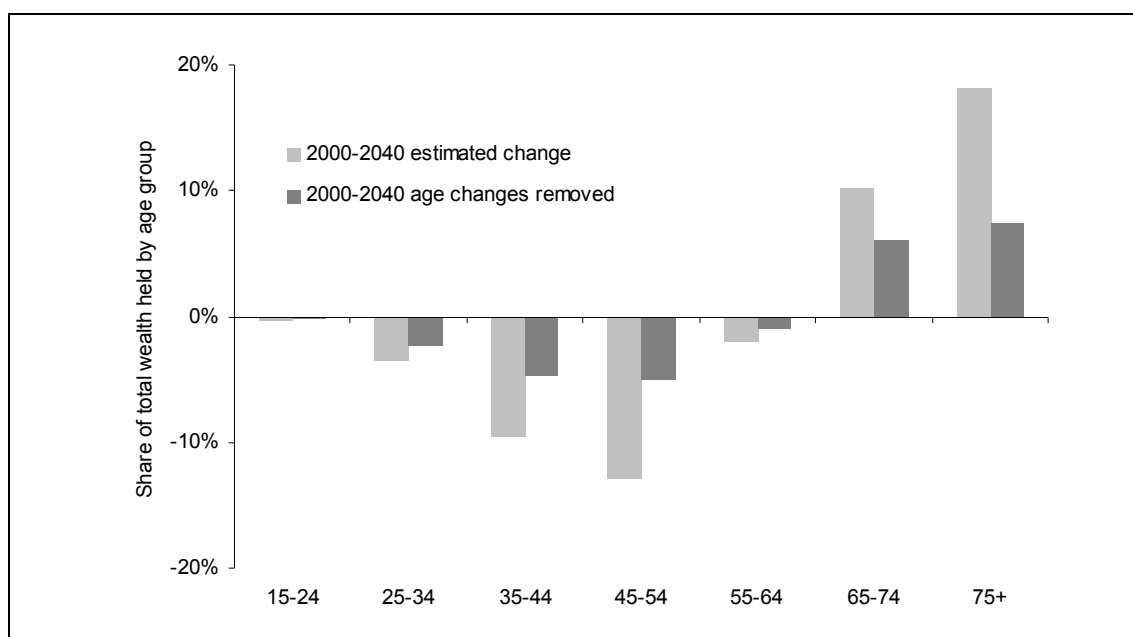
Age Group	Population		Wealth Share		Pop'n Adjusted wealth share
	2000	2040	2000	2040	2040
	No.	No.	%	%	%
15-24	1,384,423	1,485,569	0.4	0.1	0.2
25-34	1,826,911	1,823,718	5.6	2.0	3.2
35-44	1,707,019	1,696,513	17.5	7.9	12.6
45-54	1,578,578	1,719,276	29.9	16.9	24.8
55-64	1,137,326	1,734,005	24.4	22.4	23.4
65-74	936,785	1,800,028	14.2	24.4	20.3
75+	933,798	2,522,058	8.0	26.3	15.5
<i>All ages</i>	<i>9,504,840</i>	<i>12,781,167</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: 'Population adjusted wealth share' is calculated as the 2040 average 'per family' wealth of that age group multiplied by the 2000 population. This value is expressed as a percentage of the total wealth based on the same calculation.

Source: DYNAMOD projection

Also presented in the tables are columns of the share of total wealth held by each age group. These are calculated by multiplying the age group population by the average 'per family' wealth for each age group (see Figure 3 on page 8). Summing these values gives the estimate of total wealth for 2000 and 2040. In the table each age group's share of this total wealth is shown. For the final column, the 2040 average 'per family' wealth of each age group is multiplied by the number of families in that age group *in 2000*. The age group shares were then recalculated. The effect of using the 2000 population profile is to remove the forecast changes in the number of families in each age group that will occur between 2000 and 2040.

Figure 7 Estimated change in share of total family wealth by age of family head, 2000-2040



Source: Table 5

The changes in the wealth shares in Table 5 are presented graphically in Figure 7. The light grey columns show the difference between the year 2000 share and year 2040 share for each age group using the original estimates. The dark grey columns show the change after the effect of the ageing population has been removed – that is, the difference between the year 2000 share and the year 2040 values when retaining the year 2000 population profile. Both projections show that families with a head aged under 65 years will lose a proportion of their share of total wealth between 2000 and 2040. The greatest loss is estimated to be by those families with a head aged 45-54 years. The original estimate is that their share of the total wealth cake will fall 13 percentage points (from 29.9 per cent to 16.9 per cent). After removing the impact of population ageing, the share still falls by 5.1 percentage points (to 24.8 per cent). The greatest winners under both scenarios are families with a head aged 75 or over. However, with population growth incorporated they increase their share of total wealth by 18.3 percentage points; but if the number of 75 + year old families had remained at the same level as in 2000, then the growth in their share of the total wealth cake would have more than halved to only 7.5 percentage points. This is still almost a doubling of their share (8.0 per cent to 15.5 per cent).

The reduction in wealth share for younger age groups and the increase for older age groups is still evident even after the changing population structure is removed. Removal of the changes in the population age profile does reduce the impact of the changes, but the older age groups still increase their share of total wealth, while younger age groups lose some of their share.

Previously, it was estimated that families aged 65 and over would control half of all wealth.² This is still our estimate. However, we can now say of their estimated 50.7 per cent share, 35.8 percentage points is from increases in the value of assets and 14.9 percentage points are from the increase in the number of families in this age range.

Wealth variability by age

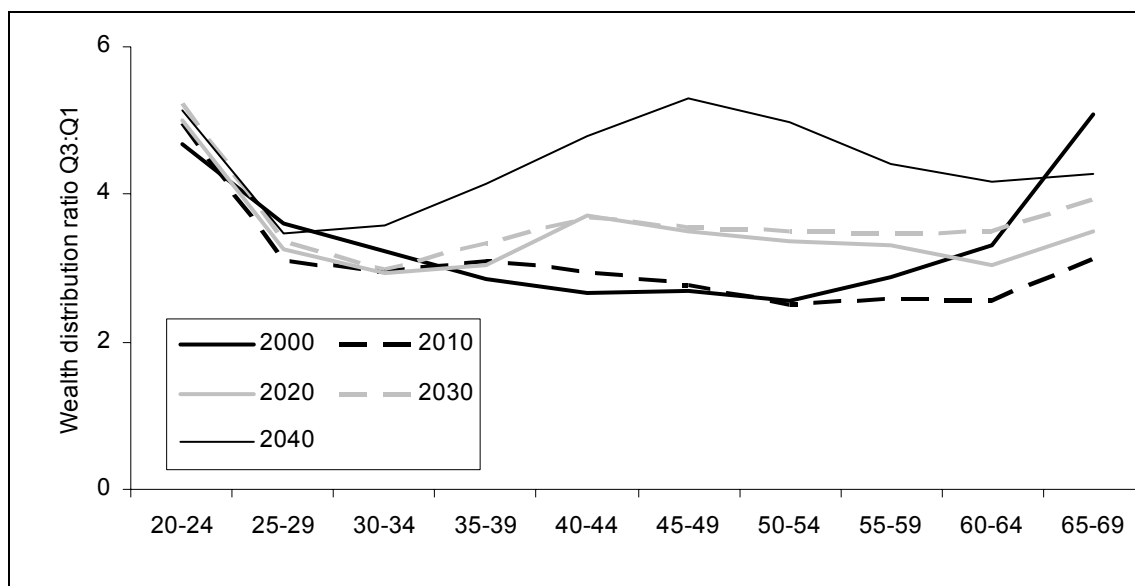
The analyses to date have investigated the changes in the distribution of wealth by age group over time. Another interesting perspective is to examine the distribution of wealth *within age groups* and the changes that are projected to happen to these distributions. It is not generally possible to examine the distribution of wealth within an age group using traditional projection techniques, but the use of microsimulation for this research allows these distributions to be calculated and analysed.

While it would be possible to calculate Gini coefficients for every age group over the 40 years, a simpler technique is to calculate a wealth distribution ratio. This computation is done by ranking all families with a family head of the appropriate age by wealth. The ratio is then calculated by dividing the wealth of the family on the 75th percentile (Q3) by the wealth of the family on the 25th percentile (Q1). Any high and low percentiles could be chosen and the selection of Q1 and Q3 is arbitrary (but common as it removes outliers but still provides adequate coverage). By way of an example, the Q1 value for 20-24 year olds in 2000 is \$1,573 – that is 25 per cent of

² Summing the values in Figure 5 on 11 gives the total share held by those aged 65 and over as 50%. The values in the figure are rounded and the actual value is 50.7%.

families headed by a 20 to 24 year old in the year 2000 had simulated assets with a net worth of \$1,573 or less. The Q3 value was \$7,385. This gives a wealth distribution ratio of 4.7 ($7385 \div 1573 = 4.695$). Plotting these ratios for ages 20 to 69 and for years 2000 through 2040 produces the results in Figure 8.

Figure 8 Estimated family wealth distribution ratios by age of family head, 2000-2040



Source: DYNAMOD projections

If we consider the year 2000 line (the thick solid black line), a concave trend is apparent. The ratio is initially high and then gradually drops to a minimum around age 50 and then gradually climbs again in retirement. At first glance this seems counter-intuitive as it does not fit with our knowledge of the distribution of income with age. In Australia, most young people are on a similar, low wage and in retirement most people are living on not much more than the pension provided by government. In 2001, 70 per cent of those aged 65 and over have an income from all sources of less than \$300 per week and the government provides a public pension of \$201 per week. A plot of the distribution of income would be the opposite of the year 2000 wealth distribution shown above. There are good reasons why the wealth distribution does not mirror our expectations based on income.

Firstly, wealth growth is quite different to income. Average wages and salaries start low, peak around 50 years old and then decline as people move to part-time work. The average retirement income can sometimes be less than the starting salary. Most people have annual salaries that grow over time but remain within a very small range (say \$20,000 for a first full-time employment to \$50,000 for a final full-time position). While some variation in the maximum income is observed, the minimum income is limited by law. The year-to-year variation is also quite small. Wealth also follows a similar trajectory but with noteworthy differences. As we have seen above, wealth generally starts at zero and then climbs strongly until retirement. In retirement it may decline but it is most unlikely to return to its original level of zero.

Secondly, the wealth range is much broader than the income range and this is reflected in the higher ratio value. For example, the absolute range in wealth between Q1 and Q3 for 60-64 year olds is almost \$300,000; for income the range is likely to be less than \$20,000.

Finally, the wealth distribution ratio reflects the considerable amounts of wealth Australians have in their home. This asset does not produce any investment income and thus is not reflected in income ratios – but its underlying value is reflected in wealth. With many people owning their home outright in retirement and others not having any equity in a home, a large difference is expected.

Significant changes in the distribution of wealth by age are forecast to take place over the next 40 years. Overall, the older age groups are projected to increase their share of wealth at the expense of younger age groups. The calculations done in this section support this premise but do show that some of the increased share is a result of demographic changes. It also shows that there is considerable variability in the levels of wealth within age groups, especially in the older age groups. Projected increases in the level of wealth inequality within age groups are another factor underlying the forecast aggregate increase in wealth inequality.

Conclusion

Based on the projections of a dynamic microsimulation model, the aggregate value of family wealth in Australia will grow strongly over the period 2000-2040. In 2000, the average Australian family was estimated to have assets valued at \$170,200. By 2040 this value is projected to be \$741,800 in real terms.

Analysis of the wealth until 2040 by wealth quintile shows that the richest Australian families are projected to see their net worth grow by \$2.4 million per family while the families in the poorest quintile will still have virtually no wealth in 2040 (\$3,000). There will be redistribution of wealth over the 40 years but it will mainly be from the poor to the rich.

The increase in wealth inequality suggested above is confirmed using Gini coefficients. Projections suggest that the wealth of the poor decreases over the period 2000-2010 but it is balanced by a redistribution of wealth amongst the wealthy and the net effect is that the Gini coefficient stays at its current level. From 2010 to 2040, the reduction in the share of wealth held by the poor continues and the redistribution amongst the rich is minimal – and thus the Gini coefficient increases. Wealth inequality is estimated to be greater in 2040 than it was in the year 2000.

One of the reasons for the increased wealth inequality is the ageing population. The assets of all age groups are forecast to grow, but the rates of growth are expected to vary with age. The average assets of the youngest families will grow at just one per cent a year, resulting the wealth of young families in 2040 being not much greater than those in 2000 — while the assets of families aged 75 and over will grow at 5.0 per cent a year and result in families of this age in 2040 controlling more than double the assets of their year 2000 counterparts. This differential growth is expected to see significant movement in the share of overall wealth held by certain age groups. The

big winner will be the 65+ age group - which is projected to have half of all assets in 2040.

The argument that the growth in assets of the older Australians is simply due to an increased proportion of older families was investigated. While some of the growth in their share of wealth could be attributed to demographic changes, the majority was not due to ageing.

Finally, projected increases in the level of wealth inequality within age groups are another factor underlying the aggregate increase in wealth inequality. Projected lower levels of home ownership will result in more members of a cohort not benefiting from the compounding growth of the value of their home while other members of the same age do receive this growth. Over time the wealth divide between the homeowners and the non-homeowners in the same birth cohort will increase.

A Wealth-percentile tables 2000-2040

Table A-1 Average Wealth by Asset and Percentile, 2000

<i>Wealth Percentile</i>	<i>Total Asset value held (\$)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop.Equity</i>	<i>Super</i>	
1-10	0	0	0	0	0	0
11-20	600	0	0	0	2,000	2,700
21-30	3,000	400	400	100	8,100	11,900
31-40	8,300	2,200	4,700	400	18,200	33,900
41-50	11,000	5,400	24,700	1,100	27,500	69,800
51-60	11,200	7,600	57,900	2,100	34,500	113,200
61-70	10,200	8,600	96,800	3,000	42,800	161,400
71-80	11,100	10,700	135,800	4,200	60,200	222,000
81-90	18,100	21,800	178,800	9,500	89,400	317,700
91-95	33,900	52,400	245,200	21,900	112,400	465,800
96-99	68,000	177,800	348,400	81,400	113,700	789,400
100	480,600	798,200	600,200	237,800	91,400	2,208,300
Average	16,600	23,400	82,100	8,800	39,400	170,200

Source: DYNAMOD Projections

Table A-2 Proportion of Wealth by Asset and Percentile, 2000

<i>Wealth Percentile</i>	<i>Proportion of Total Asset value held by percentile (%)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop.Equity</i>	<i>Super</i>	
1-10	0.0	0.0	0.0	0.0	0.0	0.0
11-20	0.4	0.0	0.0	0.0	0.5	0.2
21-30	1.8	0.2	0.0	0.1	2.1	0.7
31-40	5.0	1.0	0.6	0.5	4.6	2.0
41-50	6.7	2.3	3.0	1.3	7.0	4.1
51-60	6.8	3.2	7.0	2.4	8.8	6.6
61-70	6.2	3.7	11.8	3.4	10.9	9.5
71-80	6.7	4.6	16.5	4.8	15.3	13.0
81-90	10.9	9.3	21.8	10.9	22.7	18.7
91-95	10.2	11.2	14.9	12.5	14.3	13.7
96-99	16.4	30.4	17.0	37.1	11.6	18.6
100	29.0	34.1	7.3	27.1	2.3	13.0

Source: DYNAMOD Projections

Table A-3 Average Wealth by Asset and Percentile, 2010

<i>Wealth Percentile</i>	<i>Total Asset value held (\$)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	0	0	0	0	100	100
11-20	500	0	0	0	3,500	4,000
21-30	1,900	400	200	100	13,700	16,300
31-40	4,900	2,400	2,600	400	31,300	41,600
41-50	9,200	7,400	18,600	900	49,200	85,300
51-60	12,900	13,500	56,000	2,200	61,800	146,300
61-70	16,200	17,200	109,700	3,800	71,300	218,300
71-80	19,600	22,900	163,500	6,100	94,000	306,100
81-90	28,900	37,800	232,700	10,200	121,900	431,500
91-95	47,900	83,300	307,400	23,300	148,100	609,900
96-99	104,600	243,700	387,300	76,000	152,700	964,100
100	663,400	820,700	695,400	268,700	128,400	2,576,500
Average	22,700	32,300	96,100	9,300	59,500	219,800

Source: DYNAMOD Projections

Table A-4 Proportion of Wealth by Asset and Percentile, 2010

<i>Wealth Percentile</i>	<i>Proportion of Asset Total (%)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	0.0	0.0	0.0	0.0	0.0	0.0
11-20	0.2	0.0	0.0	0.0	0.6	0.2
21-30	0.8	0.1	0.0	0.1	2.3	0.7
31-40	2.2	0.7	0.3	0.4	5.3	1.9
41-50	4.1	2.3	1.9	0.9	8.3	3.9
51-60	5.7	4.2	5.8	2.3	10.4	6.7
61-70	7.2	5.3	11.4	4.1	12.0	9.9
71-80	8.7	7.1	17.0	6.6	15.8	13.9
81-90	12.8	11.7	24.2	11.1	20.5	19.6
91-95	10.6	12.9	16.0	12.6	12.5	13.9
96-99	18.5	30.2	16.1	32.8	10.3	17.5
100	29.3	25.4	7.2	29.0	2.2	11.7

Source: DYNAMOD Projections

Table A-5 Average Wealth by Asset and Percentile, 2020

<i>Wealth Percentile</i>	<i>Total Asset value held (\$)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	100	0	0	-100	100	100
11-20	700	0	0	0	4,600	5,400
21-30	2,600	600	400	100	18,600	22,300
31-40	6,200	2,800	3,100	400	43,100	55,600
41-50	11,200	7,800	15,900	1,300	73,600	109,900
51-60	23,900	17,200	55,600	3,900	92,900	193,500
61-70	36,000	29,400	125,700	7,400	104,100	302,700
71-80	49,000	44,800	211,900	12,200	129,500	447,400
81-90	68,200	83,300	369,000	24,300	142,000	686,900
91-95	99,500	164,000	560,200	53,300	152,900	1,029,800
96-99	196,600	406,900	702,100	136,300	171,200	1,613,000
100	961,400	1,369,600	1,105,000	391,100	166,200	3,993,300
Average	42,200	56,800	145,300	17,000	77,000	338,300

Source: DYNAMOD Projections

Table A-6 Proportion of Wealth by Asset and Percentile, 2020

<i>Wealth Percentile</i>	<i>Proportion of Asset Total (%)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	0.0	0.0	0.0	0.0	0.0	0.0
11-20	0.2	0.0	0.0	0.0	0.6	0.2
21-30	0.6	0.1	0.0	0.1	2.4	0.7
31-40	1.5	0.5	0.2	0.2	5.6	1.6
41-50	2.7	1.4	1.1	0.8	9.6	3.2
51-60	5.7	3.0	3.8	2.3	12.1	5.7
61-70	8.5	5.2	8.7	4.4	13.5	8.9
71-80	11.6	7.9	14.6	7.2	16.8	13.2
81-90	16.1	14.7	25.4	14.3	18.4	20.3
91-95	11.8	14.4	19.3	15.7	9.9	15.2
96-99	18.6	28.7	19.3	32.1	8.9	19.1
100	22.8	24.1	7.6	23.0	2.2	11.8

Source: DYNAMOD Projections

Table A-7 Average Wealth by Asset and Percentile, 2030

<i>Wealth Percentile</i>	<i>Total Asset value held (\$)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	-1,700	0	0	0	100	-1,600
11-20	700	0	0	0	4,700	5,400
21-30	3,200	600	500	100	19,900	24,300
31-40	7,400	2,900	5,200	600	47,500	63,600
41-50	15,700	7,600	14,700	1,300	88,500	127,700
51-60	34,900	17,200	42,900	3,500	123,500	222,000
61-70	58,600	30,400	114,100	8,900	136,700	348,700
71-80	94,700	58,800	221,400	17,400	153,300	545,600
81-90	171,200	109,600	423,800	43,500	167,900	915,900
91-95	251,700	169,600	829,100	94,600	153,600	1,498,500
96-99	389,600	343,300	1,240,700	197,900	173,200	2,344,600
100	1,905,000	948,800	1,619,000	558,000	182,200	5,212,900
Average	85,700	54,400	189,500	25,800	90,700	446,000

Source: DYNAMOD Projections

Table A-8 Proportion of Wealth by Asset and Percentile, 2030

<i>Wealth Percentile</i>	<i>Proportion of Asset Total (%)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	-0.2	0.0	0.0	0.0	0.0	0.0
11-20	0.1	0.0	0.0	0.0	0.5	0.1
21-30	0.4	0.1	0.0	0.0	2.2	0.5
31-40	0.9	0.5	0.3	0.2	5.2	1.4
41-50	1.8	1.4	0.8	0.5	9.8	2.9
51-60	4.1	3.2	2.3	1.3	13.6	5.0
61-70	6.8	5.6	6.0	3.5	15.1	7.8
71-80	11.0	10.8	11.7	6.7	16.9	12.2
81-90	20.0	20.1	22.4	16.9	18.5	20.5
91-95	14.7	15.6	21.9	18.4	8.5	16.8
96-99	18.2	25.2	26.2	30.7	7.6	21.0
100	22.2	17.4	8.5	21.7	2.0	11.7

Source: DYNAMOD Projections

Table A-9 Average Wealth by Asset and Percentile, 2040

<i>Wealth Percentile</i>	<i>Total Asset value held (\$)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	0	0	0	0	100	100
11-20	800	0	0	0	4,700	5,500
21-30	3,900	900	600	200	21,800	27,300
31-40	10,200	4,500	6,200	1,100	55,200	77,100
41-50	26,300	11,800	19,000	2,100	103,500	162,700
51-60	57,100	25,000	54,100	4,600	151,700	292,500
61-70	106,900	50,800	153,900	13,000	157,800	482,300
71-80	198,500	115,600	293,500	27,900	168,400	803,700
81-90	404,900	292,100	565,700	72,200	168,000	1,502,800
91-95	547,800	463,300	1,345,300	157,200	154,400	2,668,100
96-99	929,500	1,150,300	1,785,000	374,000	170,700	4,409,400
100	2,440,000	4,340,000	1,564,700	1,077,400	237,700	9,659,800
Average	169,900	162,700	263,600	45,700	100,100	741,800

Source: DYNAMOD Projections

Table A-10 Proportion of Wealth by Asset and Percentile, 2040

<i>Wealth Percentile</i>	<i>Proportion of Asset Total (%)</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Super</i>	
1-10	0.0	0.0	0.0	0.0	0.0	0.0
11-20	0.0	0.0	0.0	0.0	0.5	0.1
21-30	0.2	0.1	0.0	0.0	2.2	0.4
31-40	0.6	0.3	0.2	0.2	5.5	1.0
41-50	1.5	0.7	0.7	0.5	10.3	2.2
51-60	3.4	1.5	2.1	1.0	15.2	3.9
61-70	6.3	3.1	5.8	2.8	15.8	6.5
71-80	11.7	7.1	11.1	6.1	16.8	10.8
81-90	23.8	18.0	21.5	15.8	16.8	20.3
91-95	16.1	14.2	25.5	17.2	7.7	18.0
96-99	21.9	28.3	27.1	32.7	6.8	23.8
100	14.4	26.7	5.9	23.6	2.4	13.0

Source: DYNAMOD Projections

B Wealth-age tables 2000-2040

Table B-1 Estimated average family wealth by asset and age, 2000

	<i>Total Asset value held</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop.Equity</i>	<i>Superannuation</i>	
	\$	\$	\$	\$	\$	\$
15-19	900	0	0	0	500	1,400
20-24	2,200	200	600	200	3,500	6,600
25-29	5,700	2,300	7,100	900	13,400	29,400
30-34	9,300	9,200	27,400	2,700	24,300	72,800
35-39	9,900	20,800	53,300	7,300	37,800	129,000
40-44	11,000	36,800	86,200	13,000	55,900	202,800
45-49	14,000	49,300	114,700	17,500	75,500	271,000
50-54	17,600	59,200	151,400	19,400	93,100	340,700
55-59	20,700	61,300	165,000	18,900	91,700	357,500
60-64	30,100	37,500	164,600	12,900	89,100	334,200
65-69	53,000	19,900	151,300	12,200	33,500	270,000
70-74	48,900	13,700	139,400	10,500	9,400	221,800
75+	24,400	4,900	104,000	5,200	1,000	139,500
Average	16,600	23,400	82,100	8,800	39,400	170,200

Source: *NATSEM simulation*

Table B-2 Estimated average family wealth by asset and age, 2010

	<i>Total Asset value held</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop.Equity</i>	<i>Superannuation</i>	
	\$	\$	\$	\$	\$	\$
15-19	800	0	0	0	600	1,500
20-24	1,400	600	300	100	4,300	6,600
25-29	2,600	2,400	3,300	500	16,100	24,900
30-34	3,800	12,500	12,500	1,900	33,600	64,200
35-39	5,600	26,300	38,600	4,200	54,800	129,500
40-44	9,000	46,000	74,100	7,500	72,900	209,500
45-49	11,800	65,700	108,800	13,200	96,000	295,600
50-54	13,500	69,400	144,200	17,000	121,900	365,900
55-59	18,400	76,600	171,900	20,500	144,400	431,800
60-64	30,400	59,900	209,600	16,500	151,800	468,100
65-69	82,100	32,200	211,800	16,400	60,500	403,000
70-74	70,500	21,500	187,400	15,100	17,200	311,600
75+	62,900	10,200	141,100	11,300	3,500	228,900
Average	22,700	32,300	96,100	9,300	59,500	219,800

Source: *NATSEM simulation*

Table B-3 Estimated average family wealth by asset and age, 2020

	<i>Total Asset value held</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Superannuation</i>	
	\$	\$	\$	\$	\$	\$
15-19	500	200	0	100	600	1,400
20-24	1,400	600	500	600	4,500	7,700
25-29	3,000	4,800	6,500	2,700	16,900	33,900
30-34	3,500	18,900	20,300	6,000	36,500	85,000
35-39	4,500	40,000	39,100	10,700	62,800	157,000
40-44	7,300	73,800	77,700	17,700	95,700	272,200
45-49	15,000	105,500	142,500	23,200	135,900	422,000
50-54	24,400	125,800	196,600	27,500	162,200	536,600
55-59	39,400	136,700	230,200	29,500	187,600	623,400
60-64	51,800	105,600	262,500	25,200	208,300	653,400
65-69	138,100	66,200	288,200	19,900	88,800	601,300
70-74	115,800	43,900	302,600	26,800	22,300	511,300
75+	105,800	24,500	247,600	23,500	5,300	406,700
Average	42,200	56,800	145,300	17,000	77,000	338,300

Source: *NATSEM simulation***Table B-4 Estimated average family wealth by asset and age, 2030**

	<i>Total Asset value held</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Superannuation</i>	
	\$	\$	\$	\$	\$	\$
15-19	700	400	0	0	600	1,700
20-24	1,500	600	600	400	4,700	7,800
25-29	3,200	7,300	6,100	2,700	17,700	37,100
30-34	4,400	22,400	25,600	7,500	39,000	98,900
35-39	7,200	49,100	53,700	17,100	67,000	194,000
40-44	10,000	77,500	95,000	26,600	105,300	314,300
45-49	17,100	101,900	134,700	35,900	152,300	441,900
50-54	33,900	113,800	193,400	39,300	205,400	585,600
55-59	66,000	134,400	286,500	43,300	256,000	786,200
60-64	111,900	100,700	335,100	33,100	270,000	850,800
65-69	252,400	66,800	351,500	27,400	113,400	811,400
70-74	221,900	40,600	364,800	34,700	29,300	691,300
75+	202,600	22,200	350,700	40,600	6,500	622,700
Average	85,700	54,400	189,500	25,800	90,700	446,000

Source: *NATSEM simulation*

Table B-5 Estimated average family wealth by asset and age, 2040

	<i>Total Asset value held</i>					<i>Net Wealth</i>
	<i>Cash deposits</i>	<i>Shares</i>	<i>Equity in Home</i>	<i>Rental prop. Equity</i>	<i>Superannuation</i>	
	\$	\$	\$	\$	\$	\$
15-19	500	0	0	100	700	1,300
20-24	2,100	1,400	1,100	1,100	4,900	10,500
25-29	3,900	12,300	9,600	5,400	18,900	50,100
30-34	5,600	58,100	41,200	13,800	41,600	160,300
35-39	9,000	126,100	91,800	29,200	72,800	328,900
40-44	15,900	215,900	159,400	48,800	114,600	554,500
45-49	31,100	346,700	229,000	67,800	165,600	840,100
50-54	61,100	363,400	302,200	74,400	225,800	1,026,800
55-59	96,100	381,200	333,800	72,800	287,400	1,171,200
60-64	193,400	299,300	397,700	51,000	336,200	1,277,500
65-69	448,900	208,100	492,800	43,000	145,700	1,338,500
70-74	496,000	157,600	490,700	55,300	33,100	1,232,600
75+	380,500	77,000	449,700	72,100	7,700	986,900
Average	169,900	162,700	263,600	45,700	100,100	741,800

Source: *NATSEM simulation*

Bibliography

- ABS (Australian Bureau of Statistics) 1998a, *Population Projections 1997 to 2051*, ABS Catalogue No. 3222.0, Canberra, July.
- ABS (Australian Bureau of Statistics) 1998c, 1996/97 Survey of Income and Housing Costs Australia Confidentialised Unit Record File (CURF) Technical Paper, ABS Catalogue No. 6541.0.30.001, Canberra.
- Kelly, S. 2001, *Trends in Australian Wealth – New Estimates for the 1990s*, Paper presented to the 30th Annual Conference of Economists, University of Western Australia, September.
- Kelly, S. 2002, *Levels, patterns and trends of Australian household saving*, First report on saving for the Financial Planning Association of Australia, Melbourne, Victoria, September.
- Kelly, S. 2003, *Estimating the wealth of Australians: A new approach using microsimulation*, PhD thesis, University of Canberra.
- King, A., Bækgaard, H. and Robinson M. 1999, *DYNAMOD-2: An overview*, Technical Paper No. 19, National Centre for Social and Economic Modelling, University of Canberra, December.
- Zaidi, Asghar and Rake, Katherine 2001, 'Dynamic Microsimulation Models: A review and Some Lessons for SAGE', SAGE Discussion Paper no. 2, ESRC SAGE Research Group, London School of Economics, United Kingdom, March.